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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,695	12/27/2001	Kazuhiko Kurata	GNE462A	9287

4666 7590 12/03/2004

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EXAMINER

PHAN, HANH

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,695

Applicant(s)KURATA ET AL. **Examiner**

Hanh Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/22/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-11 and 13-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Jiang et al (US Patent No. 6,213,651).

Regarding claim 1, referring to Figures 5 and 6A, Jiang teaches an optical transceiver comprising:

a substrate (205)(Figs. 5 and 6A);

a transmitter section (110)(Figs. 5 and 6A) formed on the substrate;

the transmitter section (110)(Figs. 5 and 6A) including a light-emitting element;

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a receiver section (111)(Figs. 5 and 6A) formed on the substrate to be close to the transmitter section; the receiver section (111) including a light-receiving element;

a conductive first connection member (i.e., optical block 402, Figs. 5 and 6A) fixed near the substrate;

the first connection member (optical block 402) having a first opening (514)(Figs. 5 and 6A) that allows a first light beam from the light-emitting element (110) to penetrate the first connection member (402);

the first opening (514) being aligned to an optical axis of the light-emitting element (110);

the first connection member (402) having a second opening (513)(Figs. 5 and 6A) that allows a second light beam toward the light-receiving element (111) to penetrate the first connection member (402);

the second opening (513) being aligned to an optical axis of the light-receiving element (111); and

a transparent second connection member (i.e., lenses 423 and 421, Fig. 6A) fixed near the first member (402) in such a way as to shut the first opening (514)(Fig. 6A) and the second opening (513) (Fig. 6A) of the first connection member (402) at a front of the first connection member;

the first light beam from the light-emitting element (110)(Fig. 6A) propagating through the first opening (514) and the second connection member (lens 423)(Fig. 6A);

the second light beam toward the light-receiving element (111)(Fig. 6A) propagating through the second connection member (lens 421)(Fig. 6A) and the second opening (513)(see col. 7, lines 59-67 and col. 8, lines 1-32).

Regarding claim 2, Jiang further teaches the second connection member is formed by a thin plate of plastic or glass (Fig. 6A).

Regarding claim 3, Jiang further teaches the second connection member has a lens function (i.e., lenses 423 and 421)(Fig. 6A) for at least one of the first and second light beams.

Regarding claim 4, Jiang further teaches the second connection member is formed by a thin plate of plastic or glass; and wherein the second connection member includes a first lens (i.e., lens 423, Fig. 6A) near the first opening (514) of the first connection member and a second lens (i.e., lens 421, Fig. 6A) near the second opening (513) thereof.

Regarding claim 5, Jiang further teaches each of the first and second lenses is a convex lens (Figs. 4 and 6A).

Regarding claims 6 and 8, Jiang further teaches the first lens has a focal length defined in such a way that the first light beam emitted from the light-emitting element converges on an opposing end face of an optical fiber to be optically connected to the transceiver (Fig. 6A).

Regarding claim 7, Jiang further teaches the first lens is a convex lens and the second lens is a concave lens (Figs. 4 and 6A).

Regarding claims 9 and 17, Jiang further teaches the first connection member has a recess formed on its front face; and wherein the second connection member is located in the recess (Fig. 6A).

Regarding claim 10, Jiang further teaches the first connection member has a thickness greater than a depth of the recess, thereby part of the first connection member protrudes from the recess (Fig. 6A).

Regarding claim 11, Jiang further teaches a connection structure for connecting optical fibers (i.e., fibers 422, Fig. 6A) supported by an optical connector to the transceiver formed on the first connection member; wherein the connection structure is designed in such a way that opposing ends of the fibers are contacted with the transparent second connection member.

Regarding claims 13 and 14, Jiang further teaches the first connection member is made of metal (Figs. 5 and 6A).

Regarding claim 15, Jiang further teaches the first connection member is electrically connected to the ground (Fig. 1).

Regarding claim 16, Jiang further teaches a metallic shielding member (109)(Fig. 1) located on the surface of the substrate between the transmitter section and the receiver section wherein the metallic shielding member separates the transmitter section and the receiver section from each other.

Regarding claim 18, Jiang further teaches the first and second light beams are approximately parallel to the surface of the substrate and wherein the first connection member is fixed near an end of the substrate (Figs. 5 and 6A).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jiang et al (US Patent No. 6,213,651) in view of Prior Art Fig. 1.

Regarding claim 12, Jiang differs from claim 12 in that he fails to teach the opposing ends of the fibers protrude backward from a rear face of the connector by a specific length. However, Prior Art Fig. 1 teaches the opposing ends of the fibers protrude backward from a rear face of the connector by a specific length. Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the opposing ends of the fibers protrude backward from a rear face of the connector by a specific length as taught by the Prior Art Fig. 1 in the system of Jiang. One of ordinary skill in the art would have been motivated to do this Prior Art Fig. 1 suggests that using such the opposing ends of the fibers protrude backward from a rear face of the connector by a specific length have advantage of allowing the optical fiber connector and the optical transceiver being coupled each other.

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Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Hanh Phan

Hanh Phan

Primary Examiner

11/22/2004